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ABSTRACT

Age is often used to explain performances by older people that may be judged substandard in comparison with those of younger people. To explore age as a possible causal attribution, descriptions of task performances by young (aged 30) and old (aged 70) women were judged by young (N=352) and old (N=96) female subjects on four attributions, i.e., ability, effort, task difficulty, and luck, and on chronological age. The association between endorsement of an age attribution and endorsements of the four attributions were also investigated. Data analyses of two achievement tasks yielded consistent evidence, across judges, that age was more strongly endorsed for the failure of the older rather than the younger performer. Conversely, age was more strongly endorsed for the success of the younger rather than the older person. The interaction effect of stimulus age by outcome was significant for age attribution only. The results suggest that age is used as a causal attribution of some saliency in explaining the differences between young and old performers in both success and failure outcomes. (Author/NRB)

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Achievement Attributions by Young and Old Judges as a Function of Perceived Age of Stimulus Person[1]

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Running title: Achievement Attributions for Young/Old

It appears to be commonplace experience that simply "being old" can take on attributional significance in explaining the behaviors of elderly people. The attitude of "what can you expect of a person of that age" often seems explicit in the explanations offered for performances by older people that may be judged substandard in comparison with those of younger people. An objective of this study was to demonstrate empirically that chronological age would be used as an attributional source of the failures of older people.

Chronological age, however, has much less power for explaining behaviors than people may ascribe to it (Butler, 1963; Neugarten, 1977). It would be of interest to understand the potential underlying sources of such age attributions. What are judges really implying when they attribute older persons' failures to their being "too old" to perform differently? Therefore, a second objective of this study was to relate the attribution of age to theoretically derived attributional constructs, specifically those of the Weiner model (Weiner, 1972, 1974, 1979). Despite the numerous applications of Weiner's theory of causal attribution to the understanding of social phenomena (Frieze et al., 1979; Harvey et al., 1978), relatively few attempts (Connor & Walsh, 1980; Reno, 1979) have been made to apply these constructs to the interpretation of the behaviors of older people.

In his early formulations of achievement motivation, Weiner (1972, 1974) postulated that, on a stability dimension, ability and task difficulty are stable attributional sources while effort and luck are unstable. In addition, he initially postulated

a locus-of-control dimension of internality versus externality. In a recent reformulation of these concepts Weiner (1979) proposed a third primary dimension of causality: controllable versus uncontrollable. In achievement situations expected outcomes are usually attributed to stable causes and unexpected outcomes to unstable causes (Deaux, 1976; Frieze & Weiner, 1971). In an extension of this reasoning to the case of older people Reno (1979) found that the failure of an older man (an expected outcome) was attributed to the stable sources of lack of ability and task difficulty while a young man's failure (an unexpected outcome) was attributed to the unstable cause of lack of effort. No differences as a function of age of stimulus person, however, occurred in attributions for success or in expectancy of success.

So stereotypically is old age associated with a perceived diminution of competency (Bennett & Eckman, 1973) that failure on the part of an older person may actually be attributed to declining ability, even though chronological age is expressed as the attributional source. This lack of ability may further be perceived as due to senescence, even though the observer may more vaguely and perhaps euphemistically be ascribing it to the person's age. Because age is such a commonly used social index, the potential significance of age being perceived as an explanation that is relatively stable and expected appears far-reaching indeed.

The present experiments hypothesized that age would be used as an attribution of considerable potency when attempting to explain the <u>failures</u> of older people as compared with those of younger

people. On the other hand it was hypothesized that age would not be a distinguishing factor in the causal attributions given for successes of old versus young people. In other words, age would be perceived as a possible debilitating factor conducive to failure but not as a facilitating factor conducive to success. The experiments also examined the degree of association between age and the four Weiner-model attributions of ability, luck, task difficulty, and effort. In addition, the effects of performance history (success versus failure) were examined in an attempt to generalize the impact of performance consistency upon ability attributions, found in previous attributional research (Frieze & Weiner, 1971; Valle & Frieze, 1976), to older persons' performances as well.

Experiment I

Method

Subjects. Respondents were 176 undergraduate women (M age = 18.58, SD = 1.50) who received course credit for volunteer participation.

Task A. Stimuli were written descriptions of eight hypothetical achievement situations, all identical in wording except for modifications to provide cue variation regarding age of stimulus person (70-years-old versus 30-years-old), performance history (success versus failure), and outcome of task performance (success versus failure). The following informational cues, shown to be important for judgments of achievement (Frieze, 1979), were specified in addition to type of task and past history of performance: performance level of others, and importance of outcome of performance. The task description read as follows:

> Helen Smith, aged 70 (30), has just completed a home economics course on nutrition, offered

at the local branch campus of a state university.

Last year, Mrs. Smith had become very interested in the effects of good nutrition upon health and had decided to enroll in the university course in order to learn how to plan the most nutritious meals possible. She felt that she knew little about the nutritional value of foods and that this lack of knowledge had a bad effect upon her general level of health and resistance to illnesses. Mrs. Smith had passed (failed) two previous courses in home economics at the branch campus, one which she took about 10 years ago and the most recent about 5 years ago.

She has now passed (failed) the nutrition course with a score of 97 (55) on the final examination. This places her in the top (bottom) 12% among the people who have taken the nutrition course during the current academic quarter.

Judges were randomly assigned to one of the eight situations. After reading the description, each judge rated on a 5-point scale, from very unlikely as a reason to very likely as a reason, the likelihood of each of five causations for the particular outcome. Causations were: effort (lack of effort), ability (lack of ability), age (70) (30), good luck (bad luck), and easy (hard) task.

Results

A 2 x 2 x 2 factorial multivariate analysis of variance

(MANOVA) was computed on the five attribution measures, with age of stimulus person, performance history, and outcome as between-subjects factors.

Of particular interest to this study was the significant multivariate F (5,164) = 9.69, $p < .0001$, obtained for the stimulus age by outcome interaction effect. Subsequent univariate analyses showed a significant interaction effect only for the age attribution, F (1,168) = 48.68, $p < .0001$, $\omega^2 = .20$. Simple effects tests of the means in Table 1 indicated that, as predicted, age was more highly attributed for the older performer's failure than for the young performer's failure, t (168) = 7.22, $p < .001$, one-tailed. The opposite effect, however, was found for success outcomes: the success of the young person was more highly attributed to age than was the success of the older person, t (168) = 2.60, $p < .01$, one-tailed.

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Insert Table 1 about here

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A signficant history by outcome interaction effect was also obtained, multivariate F (5,164) = 2.60, $p < .03$. Univariate analyses showed a significant history by outcome effect only for ability attribution, F (1,168) = 11.33, $p < .001$, $\omega^2 = .06$. Consistent performances tended to be more highly attributed to ability or its lack (success/success M = 3.98; failure/failure M = 3.70) than were inconsistent performances (success/failure M = 3.50; failure/success M = 3.07) across the two stimulus ages. Of particular interest in this experiment, however, was the lack of a stimulus age x history x

outcome interaction, indicating that the effects of performance consistency were comparable for both performer ages.

Correlations of the endorsement of age as an attribution with endorsements of each of the four Weiner-model attributions were computed for the stimulus age by outcome conditions collapsed over performance history (Table 2). The only correlations consistently significant across outcomes were those of age with ability for the 70-year-old stimulus person (Table 2). Multiple-regression equations, indicating the relationship of the endorsements of the Weiner attributions to the endorsement of the age attribution, yielded an R^2 of .34 under success outcome and an R^2 of .21 under failure outcome, with the ability attribution in both equations being the significant predictor of age attribution. Under success outcome the ability attribution contributed 33% unique variance between the Weiner attributions and age, F (4,39) = 17.37, $p < .01$. Under failure outcome the ability attribution contributed 40% unique variance, F (4,39) = 5.02, $p < .01$.

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Insert Table 2 about here

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Experiment II

To provide some generalizability across tasks and respondents to the results of the first experiment, a second achievement task was administered to a new sample of 176 undergraduate women (M age = 19.23, SD = 1.86) and 96 older women (median age = 73, range = 55 to 82). Young judges received course credit for volunteer participation. Old judges, all of whom were living in

the community, were recruited on a volunteer basis from various senior centers and clubs in two small midwestern cities, with the only selection constraints that they be female and at least 55 years of age. By the criterion of occupation (past or present) of head of household, the majority of the older respondents could be considered of middle-class socioeconomic status.

Method

Task B. The written descriptions were similar in format to those used in Task A. The independent variables of age of stimulus person, performance history, and outcome were manipulated as in Task A, with the same dependent variables modified to fit the new task. Procedures and measures were the same as those in Task A. The description read as follows:

> Helen Smith, aged 70 (30), has just completed the written portion of a state driver-license test. She has yet to take the road test.
>
> Last year, Mrs. Smith moved from one state to another. To get a driver license in her new home state, it is necessary for her to retake the entire driver-license test (written part as well as road part). Since Mrs. Smith's new house is in the suburbs of a city and has no bus service, she needs her car in order to shop and carry on her social and other activities. Mrs. Smith passed (failed) two previous written driver-license tests, one which she took about 13 years ago, and the most recent about 5 years ago.
>
> She has now passed (failed) the written part

of the new driver-license test with a score of 97 (55). This places her in the top (bottom) 12% among the people who have taken the written part of the test this month.

Results

Young judges. A 2 x 2 x 2 factorial MANOVA computed on the five attributions found multivariate effects generally consistent with those in the first experiment. Again, the finding of major interest was a significant stimulus age by outcome interaction effect, multivariate F (5,164) = 13.00, $p < .0001$. Compatible with the earlier analyses, subsequent univariate analyses showed a significant interaction effect only for the age attribution, F (1,168) = 61.02, $p < .0001$, with $\omega^2 = .24$. Tests of simple effects of the means in Table 3 indicated that age was differentially attributed to the success and failure outcomes of young and old performers. Consistent with the results of Experiment I, age attribution was more highly endorsed for the failure outcome of the old person than for the failure outcome of the young person, t (168) = 8.53, $p < .001$, one-tailed. The converse effect for success outcomes, however, was again found, t (168) = 2.52, $p < .01$, one-tailed.

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Insert Table 3 about here

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A significant history by outcome interaction was again found, multivariate F (5,164) = 8.33, $p < .0001$, with a step-down F on the univariate analyses showing the most robust effect of performance consistency to be upon ability ($\omega^2 = .13$).

Correlational analyses of the endorsement of age as an attribution with endorsements of each of the Weiner attributions (Table 2) yielded no correlations consistently significant across outcomes. Although a moderate correlation was obtained between age and ability endorsements for the 30-year-old woman under success outcome, the attributions were not significantly related under failure outcome. Mean ratings given these attributions under success outcome (Table 3) suggest that neither age nor ability was perceived as a very likely causation.

Old judges. A 2 x 2 x 2 factorial MANOVA on the five attributions yielded, consistent with the data of young judges, a significant stimulus age by outcome interaction, multivariate $F(5,84) = 3.48$, $p < .01$. Univariate analyses again showed a significant interaction effect only for the age attribution, $F(1,88) = 11.90$, $p < .001$, $\omega^2 = .09$. As was the case with young judges, tests of simple effects of the means in Table 4 showed that, under failure outcomes, age was significantly more endorsed as a causal factor for the performance of the older person than of the younger, $t(88) = 2.52$, $p < .025$, one-tailed. On the other hand, under success outcomes age was more likely endorsed for the young person than for the older, $t(88) = 2.01$, $p < .025$, one-tailed.

In contrast to the results of the young judges, however, the old judges did not produce a history by outcome interaction effect and therefore showed no influence of performance consistency upon attributions.

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Insert Table 4 about here

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As obtained in the data of young judges, correlational analyses between endorsement of an age attribution and endorsements of each of the Weiner attributions failed to find relationships consistently significant across outcomes for a stimulus age. Although age attribution was found to be moderately correlated with ability attribution under success outcome for both the 30- and 70-year-old performers, significant correlations for these two attributions were not obtained under failure outcomes for either stimulus age. Inspection of the success means (Table 4) indicates that both age and ability were substantially endorsed by these old judges as the causations of the successful performance of both stimulus ages. In view of the small number of old judges, however, correlations based on their data must be interpreted with considerable caution.

Discussion

As predicted, chronological age was a salient differential attribution made by both young and old judges for the failure outcome of the older woman compared to that of the younger woman. The prediction that age would be irrelevant as a differentiating factor in the causal attributions made for success outcomes, however, was not supported. The age of the 30-year-old woman was more likely attributed, by both groups of judges, as a cause of success than was the age of the 70-year-old woman, an effect opposite to that found under failure outcomes. It would appear that, at least on the tasks employed in this study, knowledge of the age of the stimulus person sensitized judges to the potentiality of old age as a causal factor in failure, but old age cannot match youth as a causal factor explaining success. It would be interesting to be able to generalize

this interpretation to a wider diversity of tasks. Perhaps on tasks perceived as requiring greater wisdom and experience the reverse effect would be found, wherein a young person's failure and an old person's success would be attributed respectively to age.

Supportive of the notion that ascription of causation for failure to old age is tantamount to ascribing failure to declining ability is the consistent, moderate correlation between ability and age for the older woman's performances on the academically oriented task. Interestingly, similarly consistent correlations were not obtained for the driver-license test. Although judges attributed age to the older woman's failure but not to her success on this task as well, there was no consistent relationship of age to ability across outcomes. Possible explanations may lie in the nature of the tasks. One explanation for this discrepancy may be that older women are perceived as more out of date for a home economics course. Another possibility may be that old age and declining ability are linked as causal explanations in an intellectually demanding task (i.e., a home economics examination) but not in more motoric tasks. Post-hoc analyses showed that, across young and old judges, task difficulty was significantly more likely to be attributed as a cause of failure in the home economics test than was task ease attributed as a cause of success, t (174) = 8.26, $p < .001$, one-tailed. There was no significant difference between the attributions of task difficulty and ease for performances on the driver-license test.

The lack of other differential attribution effects in the

MANOVA analyses, as a function of stimulus age interacting with outcome, was rather surprising. Data on failure outcomes in these experiments were not consistent with the findings of Reno (1979), who found that the failure of an old man (an expected outcome) was attributed to stable causations and the failure of a young man (an unexpected outcome) to unstable. The effect upon other attributions of introducing age as a potential causation is unclear. It cannot be ruled out, of course, that the nature of the tasks and/or use of the female performer influenced these different results.

Not surprisingly the impact of performance consistency upon ability attribution (Frieze & Weiner, 1971; Valle & Frieze, 1976) was supported in the data of young judges for perceptions of behaviors of both young and old stimulus persons. In both tasks constancy of performance, whether success or failure, was attributed to the stable factor of ability or its lack. Interestingly, however, the causal judgments of old judges appeared to be influenced by immediate outcomes but not by performance history. Possible explanations might be that either old people are simply less influenced by perceived consistency of performance in making attributions or they formulate their attributions by weighing a more limited set of factors. However, before conjectures are made regarding judgmental tendencies of young versus old respondents it should be noted that, although both samples were assumed to be predominantly middle-class, there were no controls for educational level nor cognitive ability. It would be interesting for future research to explore whether highly educated and/or verbal older judges tend to weigh the same factors in reaching attributional

decisions as do young, college-educated judges.

In sum, age appears to be used as a causal attribution of some saliency in explaining the differences between young and old performers in both success and failure outcomes. Furthermore, it seems that age attribution is moderately related to ability attribution in some situations but that the former can have unique explanatory connotations, at least within the framework of the Weiner model, in making causal judgments. Results of this study leave nonconclusive where age should fit into the attributional dimensions of the Weiner model. Future research needs to clarify, across a variety of task paradigms, judges, and situations, the relationship of perceived age and ability of the older performer in accounting for task performance.

If research were to support age as representative of attributional stability and internality then such an attribution could presumably lead to the further perception of the old person's failure as nonmodifiable (i.e., one cannot change what is caused by old age). It would be unfortunate indeed if service providers and other personnel coming into contact with older people should tend to emphasize a causation such as age, to the neglect of potentially more modifiable causes of their behaviors.

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Table 1

Means and Standard Deviations of Five Attributions by Outcome and Stimulus Age for the Academic Task by Young Judges (N = 176)[a]

Attribution	Success Outcome		Failure Outcome	
	30-yr-old Stimulus Person	70-yr-old Stimulus Person	30-yr-old Stimulus Person	70-yr-old Stimulus Person
Age	3.27 (1.13)	2.70 (1.00)	1.65 (.90)	3.23 (1.05)
Ability/ lack of	3.54 (1.09)	3.50 (1.07)	3.48 (1.05)	3.73 (1.09)
Task ease/ difficulty	2.52 (1.06)	2.46 (1.07)	3.70 (.98)	3.66 (.85)
Effort/ lack of	4.32 (1.02)	4.50 (.86)	3.00 (1.39)	3.07 (1.34)
Good luck/ bad luck	2.16 (1.04)	2.00 (1.14)	2.36 (1.33)	2.50 (1.24)

[a]Standard deviations are in parentheses

Table 2

Correlations of Age Attribution with Four Weiner-Model Attributions: Outcome by Stimulus Age Conditions

Attribution	30-yr-old Stimulus Person		70-yr-old Stimulus Person	
	Success	Failure	Success	Failure
Task A (Home Economics Exam)[a]				
Effort	-.257*	-.070	-.014	.261
Ability	-.026	.073	.565**	.397**
Luck	.301*	-.082	.200	.148
Task Difficulty	.113	-.014	.107	.082
Task B (Written Driver-License Test)[a]				
Effort	-.024	.076	-.124	-.182
Ability	.374**	.200	.242	-.044
Luck	.140	-.055	.061	.028
Task Difficulty	.106	-.175	-.036	-.155
Task B (Written Driver-License Test)[b]				
Effort	-.147	-.248	.090	-.165
Ability	.498**	.220	.427*	.280
Luck	-.081	.673**	.028	.080
Task Difficulty	-.179	.056	.112	.157

[a]Young judges, $N = 44$

[b]Old judges, $N = 24$

*$p < .05$

**$p < .01$

Table 3

Means and Standard Deviations of Outcome by Stimulus Age Interactions for Five Attributions on the Driver-License Test by Young Judges ($N = 176$)[a]

Attribution	Success Outcome		Failure Outcome	
	30-yr-old Stimulus Person	70-yr-old Stimulus Person	30-yr-old Stimulus Person	70-yr-old Stimulus Person
Age	2.64 (1.28)	2.07 (1.02)	1.50 (.73)	3.43 (1.15)
Ability/ lack of	3.20 (1.10)	3.57 (1.00)	3.20 (1.19)	3.68 (.79)
Task ease/ difficulty	2.54 (1.15)	2.64 (1.22)	3.04 (1.30)	2.80 (1.15)
Effort/ lack of	3.59 (1.18)	3.77 (1.14)	3.80 (.99)	3.54 (1.27)
Good luck/ bad luck	2.39 (1.06)	2.50 (1.32)	2.27 (1.13)	1.98 (1.02)

[a]Standard deviations are in parentheses

Table 4

Means and Standard Deviations of Outcome by Stimulus Age Interactions for Five Attributions on the Driver-License Test by Old Judges (N = 96)[a]

Attribution	Success Outcome		Failure Outcome	
	30-yr-old Stimulus Person	70-yr-old Stimulus Person	30-yr-old Stimulus Person	70-yr-old Stimulus Person
Age	4.25 (1.07)	3.46 (1.25)	2.22 (1.57)	3.21 (1.62)
Ability/ lack of	3.96 (1.44)	3.71 (1.55)	3.88 (1.41)	3.25 (1.86)
Task ease/ difficulty	3.04 (1.53)	3.17 (1.42)	3.17 (1.42)	2.83 (1.58)
Effort/ lack of	4.42 (.96)	4.29 (1.26)	3.71 (1.32)	3.67 (1.67)
Good luck/ bad luck	2.88 (1.72)	3.17 (1.31)	2.33 (1.42)	2.79 (1.73)

[a]Standard deviations are in parentheses